Environmental Assessment
Rise Festival

Prepared by
U.S. Department of the Interior
Bureau of Land Management
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Chapter 1. Introduction

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1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Rise Festival

DOI-BLM-NV-S010-2014-0106-EA

1.1.2. Location of Proposed Action:

Jean Dry Lake bed

1.1.3. Name and Location of Preparing Office:

Las Vegas Field Office

4701 North Torrey Pines Dr.

Las Vegas, NV 89130

1.1.4. Identify the subject function code, lease, serial, or case file number:

Special recreation Permit # LLNVS0-0530-15-005

1.1.5. Applicant Name:

Ody Events

1405 North 900 West

Pleasant Grove, UT 84062

1.2. Purpose and Need for Action:

The purpose of the proposed action is to meet public demand and provide the public a recreation opportunity to experience a sky lantern festival style event. This purpose meets the BLM's need under the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. 1701 et seq., which establishes recreation as one of the principal uses of public lands, and directs the Secretary of the Interior to regulate, through permits or other instruments, the use of public lands, which includes commercial recreation use (43 CFR 2931.3(a). The Federal Land Recreation Enhancement Act (REA) authorizes the BLM to "...issue special recreation permits for group activities and recreation events "(43 CFR 2931.3(b).

1.3. Scoping, Public Involvement and Issues:

Internal scoping was done for the project and the following concerns were raised:

• Minerals operations occurring in the area.

• Fire management concerns due to the nature of the event.

• The event site and access routes are located in desert tortoise habitat, a federally listed threatened species.

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action:

The Rise Festival is a ticketed event where participants will enjoy live music at sun set. Once the sun has gone down, participants will release sky lanterns into the nighttime sky. The releasing of the lanterns will begin approximately 30 minutes after sunset and lantern releasing will continue up to one hour after the initial release of lanterns. Each participant will receive two lanterns to set off during the festival. The maximum number of participants will be 10,000 and the minimum will be 5,000

The lanterns are biodegradable with a fuel cell in the middle of the lantern. There is one fuel cell per lantern. The fuel cell is what creates the rise of each lantern into the atmosphere. Each fuel cell is cool to the touch as soon as the flame burns out. The average burn time of this fuel cell is 6-8 minutes. At a maximum allowable wind speed of 10 mph, the travel distance of the lantern, while still hot, will not exceed .7 miles.

There will be a team of ATV's and pickup trucks that will follow the lanterns until they drop. Immediately after they touch down, the team will retrieve used lanterns and properly dispose of them. the clean up crews will recover lanterns the night of event and again the next morning when the sun comes up.

A janitorial crew will be hired to work the night of the event, ensuring the proper disposal of litter and trash.

+ The staff will be experienced personnel and will be trained on all protocols for the event. In addition, all staff members will have a general knowledge of the venue and how to best protect the natural environment.

+ EMTs will be hired to supervise the safety of the event and an ambulance will be on hand for

medical emergencies.

- There will be a proposed emergency evacuation plan in place for event night. Proper security will be stationed throughout the venue to ensure the safety of all participants.
- There will be a fire marshal on site during all hours of the event and during all clean up efforts to monitor the safety of all participants and to protect the venue.
- An event director will be assigned to manage all logistics and will be the main point of contact for all situations that may arise during the event.
- Staff members will be situated throughout the venue to assist with lantern lighting and to ensure the safety of participants.
- Portable toilets will be brought in and placed strategically throughout the venue.

The RiSE Festival Timeline for the 2014 event will be as follows:

5:15-6:15 – Arrival window for participants (music will be playing and participants will be able to purchase food and beverages)

6:15-7:30 – Live music and lantern decorating

7:30-7:45 – First launch of lanterns (synchronized release)

7:45-9:30 – Lantern launching continues while music plays

9:30 – Last call for lanterns

9:45 – Fireworks (10-12 fireworks)

9:50 – House lights come up and departure bussing begins.

11:00 – Final bus departs

Spectator Traffic and Parking Control

CAPPING THE NUMBER OF SPECTATORS

After reviewing the Jean Dry Lake bed area, the Rise Festival believes that the event can accommodate 10,000 people.

The plan for capping and limiting the number of spectators will be primarily executed through ticket sales, similar to a concert or a sporting event. While the venue has a number of access points, the traffic control and parking plan that will be implemented for this festival will ensure that only ticketed spectators are allowed access to the event.

TICKET SALES

All tickets to the event will be sold prior to the event.

SECURITY PLAN FOR MANAGING SPECTATORS

Attached, as Appendix 1, is the Rise Festival Emergency Mass Evacuation Protocol. The evacuation protocol covers some of the key components of spectator safety during the event.

A more comprehensive plan for crowd control, participant safety is currently being created. That plan will address any concerns and will be reviewed in detail with the BLM upon completion.

TRAFFIC CONTROL PLAN

The Rise Festival team has successfully managed major events where traffic control has been of utmost concern. To ensure a proper flow of traffic along Las Vegas Boulevard and Knight Ranch Road before, during, and after the event, the Rise Festival will work with a company that specializes in traffic management to develop a profession plan. The plan will be created in cooperation with NDOT and other appropriate departments.

The flow of traffic will be facilitated by the reduction in traffic due to the use of buses. However, a comprehensive and professionally executed to ensure that traffic is properly managed. For parking on the gravel lot, cars will be permitted to pass under the Union Pacific Railroad tracks.

SUPPORT FROM LAS VEGAS METRO AND NEVADA HIGHWAY PATROL

The Rise Festival has contacted Las Vegas Metro Police Department for support with security and traffic management. On May 21, 2014 a meeting was held with the Rise Festival, METRO, Nevada Highway Patrol, Clark County Fire, Clark County Public Works,and Bureau of Land Management to discuss the event and ensure coordination from all parties.

It is the understanding of the Rise Festival that Las Vegas Metro is willing to provide officers upon request. However, those officers will be on hand to assist Rise security personnel for any major issues. That said, Las Vegas Metro will not act as the only source of security for the event. The Rise Festival will provide security personnel for the event.

Las Vegas Metro and Nevada Highway Patrol will review the Rise Festival plan for parking and traffic, inclusive of ingress and egress, and determine which department will provide support.

LIGHTING AND SIGNAGE ON KNIGHT RANCH ROAD

The top concern of the Rise Festival is the safety of those attending the event. To ensure that safety, lighting will be utilized along Knight Ranch Road where cars will exit onto the dirt roads. The entrance and exit points onto the lakebed will be lit with Towable Light Towers to ensure visibility of both attendees and parking attendants. The lighting for key intersections, entrance and exit points will be part of the traffic management plan that will be professionally developed and submitted to NDOT for review and approval.

PARKING ASSISTANCE

The Rise Festival will provide parking attendants as part of the traffic control plan to ensure that attendees park in the proper areas.

PARKING AREAS

Based on the BLM's recommendation, all spectators will be bussed to the dry lakebed. Participants will drive to one of the following pick-up locations:

- Gold Strike Hotel & Casino
- Las Vegas Strip Hotel (location TBD)
- Gravel Parking Lot near the Lake Bed along Knight Ranch Road near the rail road underpass that is used as a main pit for OHV races

GRADING OF ROADS AND PARKING AREAS

To ensure that all cars can navigate to the parking area on the lakebed without issue, certain sections of the dirt road will be graded. The primary area of concern is the initial drop and uneven ground adjacent to Knight Ranch Road. That area will be graded and leveled by the Rise Festival prior to the event.

Section B: Other Safety Concerns

SAFETY OF DRIVERS ON LAS VEGAS BOULEVARD AND I-15

The Rise Festival has been in contact with the Nevada Department of Transportation (NDOT) to discuss implications to traffic on both Las Vegas Boulevard and I-15. At the current time, NDOT does not perceive an issue and is not requiring a permit. An official letter has been requested and that letter will be provided to the BLM as soon as it is available.

The Rise Festival has also made contact with Clark County for approval on the event. The county does have a formal permit process for the event and that permit is being worked currently. Upon receipt of the permit from Clark County, a copy will be delivered to the BLM.

Additionally, the Rise Festival will take the following precautions to guard against incident along Las Vegas Boulevard and I-15:

Lantern Testing – Extensive testing will be performed on the lanterns to ensure that the proper fuel cell is used. The proper fuel cell is vital to ensure that the lanterns receive the proper lift but that the cell burns out before the lanterns travel outside of the designated area, including Las Vegas Boulevard and I-15. The Rise Festival has already begun testing and believes that it can utilize a fuel cell that will limit travel to the dry lake bed only even in a 10 mph wind.

Spotters – The Rise Festival will put personnel in place along both Las Vegas Boulevard and I-15 along a 2-mile stretch to watch for drifting lanterns. In the event that lanterns land on or near these roads, the spotters will be trained on the proper protocol for handling the lanterns. This protocol will be reviewed with both Las Vegas Metro and Nevada Highway Patrol.

AIRPORT FLIGHT PATHS

The Rise Festival is in the process of working with the Clark County Department of Aviation to ensure that it is compliant with all safety requirements for the festival. Should approval from the FAA be required, the Rise Festival will work to attain that as well.

The lanterns that the Rise Festival utilizes have a flight ceiling of roughly 2,500-5,000 feet, which is well below the 10,000-foot ceiling that the Rise Festival understands the FAA has approved for other events with objects in flight.

OPERATING PLAN TO COLLECT LANTERNS

The Rise Festival is serious about its obligation to leave no trace. A comprehensive plan for collecting and gathering the lanterns will be provided to BLM for review, modification and final approval.

The backbone of the plan is an aerial image of the lakebed area and the existing roads and trails. Due to the concerns regarding existing vegetation and the tortoise burrows, all Rise Festival personnel will be instructed and trained to only utilize the existing roads for vehicular travel. Personnel will be assigned an area and they will park and then walk the area to collect the lanterns.

The collection of lanterns at night will take place only if approved by the BLM. If approved, all personnel will be required to wear reflective vests and headlamps for safety. Alternatively, the same plan and approach can be utilized to recover the lanterns the following morning beginning at sunrise.

WILDFIRE DANGER

The Rise Festival is aware of the risk of fire associated with the event. All precautions will be taken place to avoid a fire. These precautions include, but are not limited to, the following:

Training – Training will be provided to all personnel associated with the event. This training will include how to properly light the lanterns, how to extinguish the lanterns, what to do if a lantern does not take flight, etc. Roughly 99% of the lanterns do not come down until the fuel cell and the fire have burned out. In the rare cases that the lanterns come down while still lit, it is due to a failure with the lantern and they typically descend within minutes making it easier to contain them and keeping them off of major roads and away from vegetation.

Wind Testing – As part of the operating plan, the Rise Festival understands that should wind speeds exceed 10 mph, the BLM may determine that it is unsafe to light the lanterns. The Rise Festival intends to perform various tests on the lanterns prior to the event to understand the impacts of wind on the lanterns. The data that is accumulated will be shared with the BLM to assist all parties in understanding the wind speeds at which it would become necessary to cancel the lighting of the lanterns. As stated, the Rise Festival does not intend to put the attendees or the natural environment at risk.

Fuel Cell Testing – The Rise Festival will design a fuel cell with a maximum burn time of 6–8 minutes. At winds up to 10 mph, this allows for a maximum travel distance of 1.5 miles. If there is a failure that brings the lantern down while the fuel cell is still lit, it will land considerably sooner than the maximum 6–8 minutes of flight time. Given that the festival will be positioned on the downwind side of the lakebed, approximately 100% of all lanterns that descend prematurely will land in the safe zone on the lakebed. As such, it will be easy to spot and recover these as they will be glowing and Rise personnel can respond quickly to ensure safety. For those lanterns that successfully take flight, once the fuel cell is exhausted, the fire burns out and the lantern begins a slow descent. At this point, the lantern is no longer a fire hazard. Based on recent testing, the Rise Festival is confident that it can keep the total flight distance to less than 1 mile. For the last half-mile of the lanterns' flight path, the lanterns will be inert with no flame and no fire hazard.

FIRE SUPPRESSION AND FINANCIAL RESPONSIBILITY

The Rise Festival understands that if a permit is issued and a wildfire were to start as a result of the event that the BLM would be in charge of putting out the fire and that the Rise Festival would be responsible for the costs incurred.

2.2. Description of Alternatives Analyzed in Detail:

Under the no action alternative, the Rise Festival would not be held.

2.3. Alternatives Considered but not Analyzed in Detail

The BLM considered an alternative where the Rise Festival would be held but without the lighting of the sky lanterns. This alternative was not analyzed in detail because it would not meet the purpose of the event.

2.4. Conformance

The proposed action has been reviewed for and found to be in conformance with this plan (43 CFR 1610.5, BLM MS 1617.3). The action conforms to the Las Vegas Resource Management Plan, signed October 1998, Objective RC-1, and RC-7b.

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Chapter 3. Affected Environment:

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3.0 AFFECTED ENVIRONMENT

Supplemental Authority	Not Present	Present/Not Affected	Present/ May be Affected	Rationale
Air Quality				
Area of Critical Environmental Concern (ACEC)	X			Resource not present
Cultural/Historical	X			This action not subject to Section 106 review. (Appendix C.10 of the State Protocol Agreement with the Nevada State Historic Preservation Office — Issuing permits and rights-of-way where no additional surface disturbance is authorized).
Environmental Justice	X			It is unlikely that any minority or low-income communities are present in project area.
Farmlands Prime or Unique	X			Resource not present
Geology / Mineral Resources/Energy Production			X	There are several mine operations currently located in the Jean area. These operations use Night Ranch Road and Light Haul Road to access there mines and transport equipment, supplies and material. The mine sites also have valuable and potentially dangerous equipment within their contract areas. Affected Environment, Environmental Effects, Mitigation Measures and Stipulations are provided below this table.
Noxious Weeds/ Invasive Non-native Species		X		All travel vectors have increased risks of introducing and transporting weeds. The high volume of vehicle traffic and parking in the proposed action introduces a considerable risk of spread and establishment of Invasive Speceis/Noxoius Weeds. BLM Standard Weed Stipulations clearly outline standards for vehicle and equipment washing to reduce the transportation of Invasive Speceis / Noxious Weed seeds on BLM lands. These stipulations as well as all BMP's must be followed to mitigate risk of establishing new weed infestation within the project area.
Native American Religious Concerns		X		No new surface disturbance is proposed in association with this undertaking. Any visual or audible impacts to properties of religious or traditional significance will be short-term and temporary. No impacts are anticipated

Floodplains		X		Participants will remain on existing roads and trails and will stage in existing disturbed areas. DO NOT ENTER washes, floodplains or dry lakes during rain or shortly before or after precipitation events. No new impacts to floodplains or will not impact downstream flooding if washes, floodplains and dry lakes are used during dry conditions ONLY.
Fules/Fire Management			X	The proposed action is to allow up to 10,000 event participants ignite and release up to 20,000 sky lanterns at night on BLM lands at Jean Dry Lake near Jean, NV in October. Commercial fireworks are also planned. Under 43 CFR 9212 Wildfire Prevention, *§9212.1 Prohibited acts,* causing a fire, using an incendiary device or burning vegetation is prohibited unless permitted in writing by an authorized officer. Fireworks are also prohibited on BLM lands. Sky lanterns or fireworks could cause a fire, therefore sky lanterns are prohibited unless permitted by an authorized officer in writing (43 CFR § 9212.3). Seasonal fire restrictions are usually in place for BLM public lands in Southern Nevada May 1 through October 15 (43 § CFR 9212.2). The proponent is planning the event outside of seasonal fire restrictions. The proposed action does include wildfire minimization measures such as only releasing sky lanterns under certain weather conditions, engineering the sky lanterns and planning the event to reduce wildfire risk. The expected flight distance of the sky lanterns is up to two miles and according to the proponent, “for the last half-mile of the lanterns’ flight path, the lanterns will be inert with no flame and no fire hazard.” The proponent has communicated that the sky lanterns have an approximate failure rate of 1%, which could mean up to 200 sky lanterns may not operate as planned. And, according to the proponent, the sky lanterns that fail would likely fail in the Jean Dry Lake bed. The lakebed is mostly devoid of burnable vegetation. While many wildfire concerns can be minimized, mitigated or planned for, the fireworks or up to 20,000 sky lanterns could be potential ignition sources that could start a wildfire on BLM lands. Weather and winds can be forecasted but as is commonly known, weather and winds can be unpredictable. Sky lanterns could drift or be blown off course or some sky lanterns

				may not operate as planned and cause a fire on BLM lands. Fireworks are commonly known to start fires on BLM public lands. The proponent acknowledges "that if a permit is issued and a wildfire were to start as a result of the event that the BLM would be in charge of putting out the fire and that the Rise Festival (proponent) would be responsible for the costs incurred." The proposed activity could cause a fire and because the proposed activity is prohibited without written authorization under the general provisions of 43 § CFR 9212, the determination is *present with potential for relevant impacts that need to be analyzed in detail in the EA*.
Riparian/Wetlands	X			Resource not present
Threatened, Endangered Species.			X	Festival without lanterns: NI —This project will be in compliance with section 7 of the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.;) for consultation with the USFWS on effects to federally listed, proposed and candidate species. The above action has a may affect, likely to adversely affect determination for the threatened desert tortoise (*Gopherus agassizii*) and a no effect determination for its designated critical habitat, as the project is outside of this range. This determination is based on the size of the event and number of people/vehicles involved. This project will have no effect on any other federally listed species or designated critical habitat due to absence of the species and/or habitat. The Jean Dry Lake bed is typically not inhabited by desert tortoise because of periodic flooding and lack of cover and forage. The area surrounding the dry lake bed in the project area is suitable desert tortoise habitat and historical survey data indicate the area ranges from very low to very high density tortoise habitat. Since tortoises have been found within ½ mile of the site and undisturbed habitat exists adjacent to the project site, there is potential for tortoises to be impacted by the proposed action from the large number of vehicles entering the site or at nearby staging areas. Desert tortoises could be either injured or killed (by crushing) by vehicles or harassed/harmed (by being moved out of harm's way). Ingress and egress to the dry lake bed area will be restricted to 1-2 designated roads only, and the speed limit for the event will

				be 15 mph on the road entering/exiting the site per the terms and conditions of the biological opinion. A desert tortoise monitor will be required to be on-site and assist with any issues that arise with desert tortoises and inspect roads prior to vehicles entering the project area, per terms and conditions 1.d. A monitor will not be necessary to be on-site as vehicles exit the area, since it will be at night while tortoises are in their burrows. A desert tortoise monitor must be present while using any heavy equipment (e.g., for grading), per terms and conditions 1.f. All staging and parking areas for vehicles will need to be on the dry lake bed or in other disturbed areas typically used for event parking, and vehicles in these staging and parking areas will check underneath them for tortoises before moving them. If a desert tortoise is observed in the road, all activities will cease until the desert tortoise has moved to a safe area on its own, per 1.d. of the terms and conditions. Section 7 Consultation for this project will be covered under the Programmatic Biological Opinion (84320-2010-F-0365.R002) contingent on compliance with the terms and conditions. Terms and conditions and minimization measures in the above Biological Opinion contain measures to reduce potential impacts, including take, to desert tortoise. A copy of the terms and conditions has been uploaded to ePlanning (Sec 7 Log # NV-052-14-166). This notice will serve as the Section 7 Determination and no additional paperwork will be provided. Festival with lanterns: PI —Carry forward for analysis.
Migratory Birds			X	Festival without lanterns: NI —The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 *et. seq*.) protects migratory birds and their nests (nests with eggs or young). The proponent must comply with the MBTA and avoid potential impacts to protected birds within the project area. A list of MBTA protected birds are found in 50 C.F.R. 10.13 (http://www.gpo.gov/fdsys/pkg/CFR-2012-title50-vol1/xml/CFR-2012-title50-vol1-sec10-13.xml). The proposed action will not create any new disturbance or remove existing vegetation, so no impacts to migratory birds are anticipated by the action. The proposed

				action will also occur outside of the Feb. 15 – Aug. 31 breeding season. Festival with lanterns: PI —Carry forward for analysis.
Waste –Hazardous/ Solid				
Water Quality		X		Participants will remain on existing roads and trails and will stage in existing disturbed areas. DO NOT ENTER washes during rain or shortly before or after precipitation events. No new impacts to water quality or local water resources if washes are used during dry conditions ONLY.
Wild & Scenic Rivers	X			Resource not present
Wilderness	X			Resource not present
Forests and Rangelands (HFRA only)	X			Resource not present
Human Health and Safety.		X		The threat to human health and safety is mitigated through the proposed medical and emergency evacuation plan.

Wildlife

The proposed project area supports and is adjacent to lands that support wildlife characteristic of the Mojave Desert. Biological diversity varies according to topography, plant community, and proximity to water, soil type, and season.

Several common species of reptiles that may be present in the vicinity of the proposed project site may include the western whip-tail (*Cnemidophorus tigris*), desert iguana (*Dipsosaurus dorsalis*), side-blotched lizard (*Uta stansburiana*), and zebra-tail lizard (*Callisaurus draconoides*).

Common bird species that may be present in the vicinity of the proposed project site may include the black-throated sparrow (*Amphispiza bilineata*), turkey vulture (*Cathartes aura*), common raven (*Corvus corax*), and red- tailed hawk (*Buteo jamaicensis*).

Common mammal species include black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), badger (*Taxidea taxus*), kit fox (*Vulpes macrotis*), and many species of rodents.

BLM Sensitive Wildlife Species

BLM sensitive species are species that require special management consideration to avoid potential future listing under ESA and that have been identified in accordance with procedures set forth in BLM Manual 6840. The following sensitive species are known to potentially occur within the area: western burrowing owl, chuckwalla, banded Gila monster, Mojave shovel-nosed snake, desert glossy snake, and Mojave Desert sidewinder.

Western burrowing owl (***Athene cunicularia hypugaea***)

The Western burrowing owl is a diurnal bird of prey specialized for shrub-steppe habitats. Burrowing owl habitat in the Mojave Desert typically consists of open, dry, treeless areas on the

desert floor. Burrowing owls most frequently use mammal burrows created by other animals such as ground squirrels (*Spermophilus* spp.), coyotes (*Canis latrans*), or desert tortoises (*Gopherus agassizii*). The burrows are used for nesting, roosting, cover, and caching prey. In recent decades, the range and species count have been declining primarily due to agricultural, industrial, and urban development that reduce burrow availability.

Western chuckwalla (***Sauromalus obesus*****)**

The western chuckwalla is a BLM sensitive species that is found throughout the Mojave Desert. Chuckwallas inhabit rocky outcrops where cover is available between boulders or in rock crevices, typically on slopes and open flats below 5000 feet. Typical habitat includes rocky hillsides and talus slopes, boulder piles, or other clusters of rock, usually in association with Mojave Desert Shrub vegetation. This species requires shady, well-drained soils for nests. The chuckwalla is a widespread species, but is regionally limited by its requirement for rock outcrops. Chuckwallas likely occur within the project area, but would be localized on rock outcroppings.

Banded Gila monster (***Heloderma suspectum*****)**

The Gila monster is a large, heavy-bodied lizard with a massive head, a short thick tail, and short limbs with strong claws. It has flamboyant dorsal coloration of black and pink, orange, or yellow and occasionally exceeds 50 centimeters (19.7 inches) in total length. The Gila monster's range includes southern Nevada. Its habitat includes Mojave Desert scrub, desert grassland, and thorn scrub. Threats to this reptile include illegal collection, traffic fatalities, and most severe is habitat destruction from urban and agricultural development.

Mojave shovel-nosed snake (***Chionactis occipitalis occipitalis*****)**

The Mojave shovel-nosed snake is a burrowing, nocturnal snake frequenting washes, dunes, sandy flats, loose soil, and rocky hillsides in sandy gullies or pockets among the rocks throughout the Mojave Desert.

Desert glossy snake (***Arizona elegans*****)**

The desert glossy snake is a burrowing, nocturnal snake that occurs in a variety of habitat throughout the Mojave Desert including light shrubby to barren desert, grasslands and woodlands. The desert glossy snake generally prefers open areas where the ground is sandy to loamy.

Mojave Desert Sidewinder (***Crotalus cerastes cerastes*****)**

The Mojave Desert sidewinder is a nocturnal snake hiding in the day in animal burrows or coiled camouflaged in a shallow self-made pit at the base of a shrub. This species is most common where there are sand hummocks topped with creosote bushes, mesquite, or other desert plants but may also occur on flats, barren dunes, hardpan, and rocky hillsides.

MIGRATORY BIRDS

Under the Migratory Bird Treaty Act of 1918 (MBTA) and subsequent amendments (16 U.S.C. 703-711), it is unlawful to take, kill, or possess migratory birds. A list of MBTA protected birds are found in 50 C.F.R. 10.13 (http://www.gpo.gov/fdsys/pkg/CFR-2012-title50-vol1/xml/CFR-2012-title50-vol1-sec10-13.xml). The list of birds protected under this regulation is extensive and the project site has potential to support many of these species, including the BLM sensitive species the western burrowing owl (*Athene cunicularia_hypugaea*). Typically, the

breeding season is when these species are most sensitive to disturbance, which generally occurs from February 15th through August 31st.

THREATENED & ENDANGERED SPECIES

This project will be in compliance with section 7 of the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.;) for consultation with the USFWS on effects to federally listed, proposed and candidate species. The above action has a may affect, likely to adversely affect determination for the threatened desert tortoise (*Gopherus agassizii*) and a no effect determination for its designated critical habitat, as the project is outside of this range. This determination is based on the size of the event, the number of people/vehicles involved, and the risk of fire. This project will have no effect on any other federally listed species or designated critical habitat due to absence of the species and/or habitat.

Threatened and endangered species are placed on a federal list by the U. S. Fish and Wildlife Service (USFWS) and receive protection under the Endangered Species Act of 1973, as amended. The only T&E species known to occur in the vicinity of the project area is the threatened desert tortoise (*Gopherus agassizii*).

In the Mojave region, the desert tortoise occurs primarily on flats and bajadas with soils ranging from sand to sandy-gravel characterized by scattered shrubs and abundant inter-shrub space for herbaceous plant growth. They are also found on rocky terrain and slopes.

The Jean Dry Lake bed is typically not inhabited by desert tortoise because of periodic flooding and lack of cover and forage. The area surrounding the dry lake bed in the project area is suitable desert tortoise habitat and historical survey data indicate the area ranges from very low to very high density tortoise habitat. Since tortoises have been found within ½ mile of the site and undisturbed habitat exists adjacent to the project site, there is potential for tortoises to be impacted by the proposed action from the large number of vehicles entering the site or at nearby staging areas. Desert tortoises could be either injured or killed (by crushing) by vehicles or harassed/harmed (by being moved out of harm's way).

Geology / Mineral Resources/Energy Production

There are several mine operations currently located in the Jean area. These operations use Night Ranch Road and Light Haul Road to access their mines. These roads are used for employee access and to transport equipment, supplies and material. Hours of operation for the mines using these roads are typically 6:00 am to 6:00 pm, Monday through Friday. However, during large construction jobs and when there is a high demand for their product, hours can be extended and the mines will remain open on the weekends. In addition, staging areas and spectator areas are located near existing mine sites. These mine sites contain valuable and potentially dangerous equipment and fuel.

Fuels/Fire Management

Jean Dry Lake is located mostly within the Fire Management Units (FMU) NV-05-01 Tortoise Moderate Density and NV050-18 Goodsprings-Primm. Jean, NV is about 3 miles southeast of Jean Dry Lake. I-15 is about 2 ½ miles west of Jean Dry Lake. About 8 miles to the northeast is NV050-05 Sloan NCA FMU and about 5 miles to the east is NV050-03 Tortoise ACEC South FMU.

The overriding priority for all wildland fire actions is firefighter and public safety, protecting natural and cultural resources, and restoring fire damaged ecosystems (BLM LVFO FMP, 2004).

NV-05-01 Tortoise Moderate Density FMU

The primary unifying attribute of this FMU is that it incorporates all of the moderate density and most of the low density Desert tortoise range in the Las Vegas Field Office. Historically, in their undisturbed condition, the low elevation desert shrub communities of this FMU (creosote bursage, blackbrush, saltbush, Mojave scrub, etc.) did not typically support the spread or intensity of wildfire. Approximately 98% of this FMU consists of desert shrub communities, primarily creosote bursage, blackbrush and Mojave scrub. The other 2% of the FMU consists of scattered pockets of higher elevation land, vegetated by mountain chaparral types and pinyon-juniper woodlands.

Topography

- Elevation Range: 1,397 feet to 5,396 feet
- Slope: mostly less than 10%; some areas of 10-30%
- Aspect: Various

Major Topographical Features

- Mormon Mesa
- Muddy Mountains
- California Wash
- Eldorado Mountains
- New York Mountains
- Hiko Wash
- Newberry Mountains
- Ivanpah Valley
- Pahrump Valley

General Fire Protection Characteristics

- The low elevation, desert shrub habitat portions of this FMU constitute high suppression priority T&E species values (Desert tortoise).
- Widely scattered throughout this large FMU are pockets of riparian and/or mesquite/acacia habitat. A secondary priority in this FMU is to protect all such habitats from substantial disturbance, either from wildfire or from the impacts of firefighting activities.
- Higher elevation portions of this FMU contain mountain shrub communities and even pockets of pinyon-juniper woodland.

Surface Fuel Model & Canopy Cover

- With few exceptions, fine fuels drive the characteristics of wildland fires occurring in this FMU. These fine fuels are ephemeral and primarily consist of red brome and other non-native annual grasses.

FMU Public Safety, Economic & Community Values at Risk

- Life safety (public and firefighters)
- Moderate and low density Desert tortoise range (T&E Species)
- Sensitive species, including 16 plants that are strongly associated with gypsum soils, deep-sand swales, or coarse gravelly washes. Populations are concentrated in Mormon Mesa; California Wash; Weiser Wash; Bitter Springs Valley; White Basin; Gypsum Spring; Frenchman Mountain/Rainbow Gardens; Hidden Valley; Jean Dry Lake Valley; Ivanpah Valley; southern Pahrump Valley.
- Other sensitive species habitats/populations (bats, birds, plants)
- Riparian and mesquite/acacia habitats.
- Bighorn sheep crucial habitat; Bighorn sheep winter range.
- Mule deer crucial summer habitat; Mule deer winter range.
- Wild horse and burro ranges
- Arrow Canyon Wilderness Area
- Muddy Mountains Wilderness Area
- Eldorado Wilderness Area
- Ireteba Peaks Wilderness Area
- South McCullough Wilderness Area
- Mount Charleston Wilderness Area
- Mount Stirling Wilderness Study Area
- Sunrise Mountain Instant Study Area
- Rainbow Gardens ACEC (sensitive plant species habitat)
- Arrow Canyon ACEC
- Hidden Valley ACEC
- Crescent Townsite ACEC
- Mines
- Utility line corridors and ROW's
- Grazing Allotments

The Red Rock Herd Management Area is approximately 6 miles northwest of Jean Dry Lake. The Ivanpah ACEC is about 2.5 miles southwest of Jean Dry Lake. The South McCullough Wilderness Area is about 5.5 miles to the southeast of Jean Dry Lake. The Sloan Canyon National Recreation area is about 7 miles to the northeast. The Paiute-Eldorado Valley ACEC is about 8 miles to the southeast.

Wildland fire protection on all BLM public lands within this FMU is provided by the BLM Southern Nevada District Office. Structural fire protection on private lands within this FMU is provided by the Clark County Fire Department and/or other adjacent rural or volunteer fire departments.

Initial attack success in this FMU is defined at 15 acres 90% of the time. Decadal wildfire burn tolerance is 500 acres for this FMU and was exceeded during the 2005-2006 fires seasons (BLM LVFO FMP, 2004).

NV050-18 Goodsprings-Primm FMU

This discontinuous FMU takes in wildland urban interface including the rural towns of Goodsprings, Primm, Sandy Valley, Jean, and the Jean area. This FMU mainly consists of creosote bursage habitat, which in certain years is heavily infested with the invasive annual grass, red brome. Although mesquites and acacias resprout following fire disturbance, these woodland stands need to be protected from high intensity wildfire in order to preserve the canopy structural character (for sensitive bird species habitat suitability, mainly for Phainopepla). Most wildfires occur in tamarisk-infested areas. Typically, these fires are wind driven and are of moderate to high intensity. Small, low intensity wildfires in tamarisk are less common but do occur. The Goodsprings, Primm, Jean, and Jean Lake disposal area WUI zones are surrounded by BLM lands. BLM lands include upland shrub habitats, areas of medium and low density Desert tortoise habitat, and stands of mesquite/acacia woodlands.

Topography

- Elevation Range: 2599 to 3,999 feet
- Slope: less than 10%
- Aspect: flat

Major Topographical Features

- This FMU consists of five discontinuous WUI zones located south of Las Vegas. The Jean Lake area on Interstate 15 in Ivanpah Valley is approximately 10 miles south of Las Vegas.

Resource Use

- Human life and property values
- Town of Goodsprings
- Town of Primm
- Town of Sandy Valley
- Town of Jean

- Dispersed recreation; special use permit activities
- Public lands:
  - Utility line ROW's
  - Sand and gravel pits
  - Jean Lake grazing allotment
  - Commercial and residential urban activities and infrastructure
  - Utility line ROW's
  - Farms and ranches

Habitat Values

- Mesquite/Acacia woodland habitat.
- Moderate density Desert tortoise habitat
- Sensitive plant species habitat
- Wild horse and burro Red Rock Herd Management Area

FMU Public Safety, Economic & Community Values at Risk

- Human life and property values
- Town of Goodsprings
- Town of Primm
- Town of Sandy Valley
- Town of Jean
- Dispersed properties and developments (homes, ranches, etc.)
- Mesquite/acacia woodland habitat
- Desert tortoise habitat (moderate density)
- Sensitive plant species habitat
- Utility line ROW's

FMU Fire Protection Responsibility

Wildland fire protection on all BLM public lands within this FMU is provided by the Las Vegas Field Office. Structural fire protection on private lands within this FMU is provided by the Clark County Fire Department and/or adjacent rural or volunteer fire departments.

Wildfire Management Priorities

- Life safety (public and firefighters)
- Protection of human communities (including community infrastructure)
- Protection of other property and improvements
- Protection of mesquite/acacia woodlands
- Protection of moderate density Desert tortoise habitat
- Protection of sensitive plant species
- Protection of other natural resources
- Protection of cultural resources

Suppression/Protection Priorities:

- Town of Goodsprings, NV
- Town of Primm, NV
- Town of Sandy Valley, NV
- Town of Jean, NV
- Dispersed WUI values (ranches, homes, power lines, etc.)
- Federally listed T&E species: Desert tortoise
- Mesquite/acacia woodlands (Sandy Valley)
- Rosy two-toned penstemon, White-margined penstemon, and Yellow two-toned penstemon sensitive plant species habitat

Fire Suppression Objectives

- Protect human life and property values while minimizing impacts to T&E or Sensitive Species populations and habitats.

Initial attack success is defined at one acre 90% of the time. Decadal wildfire burn tolerance is 50 acres and has been maintained (BLM LVFO FMP, 2004).

Common to both FMUs

Due to human influences during the past century or more, wildfire now occurs in these desert plant communities with much greater frequency, size, and intensity. These fires are most typically wind driven and are also strongly correlated to ephemeral buildups of invasive annual grasses, primarily red brome.

Fire Weather & Climate Related Impacts

- Wet lightning is common in this area. Fires generally remain small when starts occur under these common conditions.

- Dry Lightning is possible in this area. Larger fires can occur with these erratic and gusty thunderstorm events.
- Larger fires occur when human ignitions occur under typical warm and windy summer weather.
- Fire behavior can be extreme under these conditions in heavily infested tamarisk riparian areas.

Live Fuel Moisture Characteristics

- At live fuel moisture levels of 181% and above fires typically will exhibit Very Low Fire Behavior characteristics
- At live fuel moisture levels of 151% to 180% fires typically will exhibit Low Fire Behavior characteristics
- At live fuel moisture levels of 126% to 150% fires typically will exhibit Moderate Fire Behavior characteristics
- At live fuel moisture levels of 101% to 125% fires typically will exhibit High Fire Behavior characteristics
- At live fuel moisture levels of 75% to 100% fires typically will exhibit Extreme Fire Behavior characteristics
- At live fuel moisture levels of 75% and below fires typically will exhibit Advanced Fire Behavior characteristics

Fire Ecology

Fire Regime Condition Class

Much of the area around Jean Dry Lake is in Fire Regime Group V and is in Condition Class 3 primarily due to invasive annual grass (BLM LVFO FMP, 2004). Wherever red brome and cheat grass dominate, the prevailing Condition Class is 3 due to the loss of key ecosystem components such as native species. The establishment of red brome and cheat grass in a wildland community fosters much more frequent fire return intervals by extending the time during which the vegetation community is susceptible to wildfire ignitions.

Fire History

Year	Number of Wildfires	Wildfire Acres
2000	2	1.1
2004	3	0.5
2005	2	6.1
2006	3	11.2
2009	1	0.1
2010	2	0.5
2011	1	3.6
2013	4	0.4
Total	18	23.5

Fires are typically categorized on the basis of period of occurrence, size class, regime, and condition class. Wildfires can occur year-round in much of the Mojave region. For the planning area, the general fire season is usually May through October. The most critical fire conditions

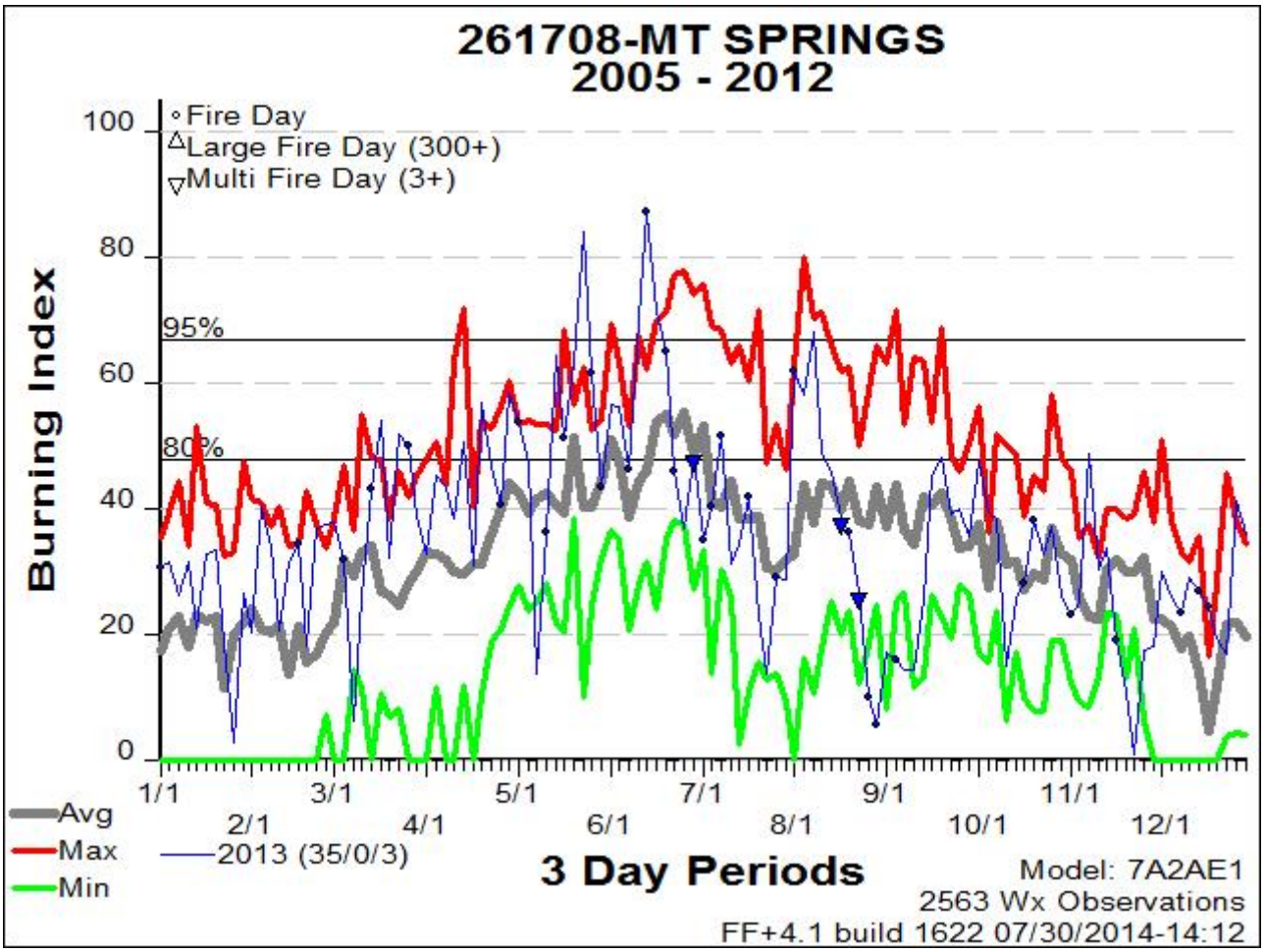
correspond with the hot summer period characterized by low moisture and midsummer thunderstorms.

Fires are widely distributed in terms of frequency and severity. The weather and fuel structure in the planning area provide an opportunity for ignitions from frequent summer thunderstorms and human caused fires. About 12 miles to the northwest of Jean Dry Lake, in 2005 the Good Spring Fire burned 33,569 acres. However, most fires within the vicinity of Jean Dry Lake have been less than 0.1 acre. The table shows historic wildfires within a 5 mile radius of Jean Dry Lake (see table).

Fire Danger

Seasonal Fire Danger

Seasonal fire danger varies according climatic and environmental conditions such as air temperature, precipitation, relative humidity, wind speed, and wildland fuels. The National Fire Danger Rating System (NFDRS) utilizes fire weather station data to calculate fire danger indices like Burn Index (BI). BI is a number related to fire behavior and the effort needed to contain a fire. The Mountain Springs fire weather station is located about 20 miles northeast of Jean Dry Lake and station data was used in generating the following BI seasonal fire danger graph. The peak fire season in Southern Nevada usually occurs in June-July. Fire danger typically drops off during the monsoon season and into the fall/winter seasons. Fire danger during October is usually below critical fire danger thresholds however, fires can and are known to occur year round. No documented fires have occurred within a 5 mile radius of Jean Dry Lake in October on BLM lands. BI can increase in October but it varies according to seasonal weather conditions. The average Mountain Springs' BI around October 18 is about 30 but it can be higher or lower for NFDRS Fuel Model A-Western Annual Grass; depending on the local conditions (see graph).



Wildland Fuels

Wildland fuel conditions vary seasonally and annually in Southern Nevada and are dependent on climatic conditions. For 2014, multi-year drought conditions have increased fire danger in Southern Nevada. However, drought conditions also have resulted in less invasive annual grass (red brome, cheat grass, etc.) production. Less annual grass production means less fine, flashy fuels to carry fires. However, due to drought, many brush and timber species are at increased risk due to wildfire.

Jean Dry Lake is typically devoid of fuels. Currently, in areas adjacent to the Jean Dry Lake, ephemeral annual grass loading has been observed as minimal. Less fine fuels can result in less chance for fire ignitions and fire spread. Native brush and grass species are present but the interspaces between native plants are relatively clear of burnable vegetation, resulting in less continuous fuels. However, these conditions could change based on local growing conditions and climate. August monsoons in 2012 and 2013 resulted in the growth of native grasses in some areas that cured and were available to burn in October. In 2010 and 2011, cool fall/winter precipitation resulted in increased growth of cheat grass and red brome. Cool season grasses typically don't cure until after March. Some annual grass fuels such as red brome can carry over into the next two fire seasons. There are stands of native grasses such as big galleta that could burn but the stands contain open interspaces in between individual plants.

Fuel moisture varies annually and seasonally. Dry fuels tend to readily ignite and result in increased fire intensity and severity. Current drought conditions have decreased fuel moistures to critical thresholds. Conditions in October will be dependent on seasonal climatic conditions. Seasonal monsoons in 2014 may mitigate drought conditions in some areas. Fall precipitation could also mitigate fuel moisture.

The following photos illustrate the current fuel conditions and show that much of the area surrounding Jean Dry Lake is devoid of ephemeral invasive annual grass and the interspaces between native brush and grasses are relatively clear. Less continuous fuels typically limit fire spread. For less continuous grass and shrub fuels, high wind spread can be a factor in fire spread. The last photo indicates few adjacent areas do have fuels that are more continuous and more easily carry fire. Observations indicate some wildland fuels are immediately are adjacent to proposed event area.

The following photos illustrate fuel conditions adjacent to Jean Dry Lake as of July 2014.


DATE
7/24/14
PHOTO POINT
2
LOCATION
N 35 47 57.81
W 115 15 20.1


DATE
7/26/14
PHOTO POINT
3
LOCATION


DATE
7/24/14
PHOTO POINT
4
LOCATION


DATE
7/26/14
PHOTO POINT
5
LOCATION
N 35 48 16.68
W 115 11 37.38

Weather

Precipitation in the form of wetting rain can reduce fire danger. However, in the Mojave Desert, improvements due to precipitation can be short-term. Hot and dry conditions are common in the Mojave Desert, even at night. Low relative humidity can result in increased probability of ignition and increased fire behavior. Increased relative humidity can reduce fire behavior relative to fine fuel and localized fire conditions. In particular, increased relative humidity can result in increased fine dead fuel moisture. Fine dead fuel moisture is a contributing factor in fire spread and calculated, in part, based on time of year, temperature, and relative humidity. Higher temperatures can contribute to increased fire behavior. Increased wind speed can contribute to increased fire behavior. Wind direction influences the direction of fire spread.

The following tables summarize weather data for two weather stations near Jean Dry Lake (Mesowest, http://mesowest.utah.edu/, accessed 7/25/2014). The Jean station is at the Jean Airport. Jean SE 2 is approximately 5 miles to the southeast of Jean Dry Lake. Data summarized is over several years, 10/18 over the hours of 1600-0059. The data summary could be considered as representative of the time planned for the proposed action. However, data was provided to Mesowest by Clark County Flood Control District and is subject their data quality control. The table shows that weather can be variable in the Jean Dry Lake area on 10/18. In particular, wind direction and wind speed may reflect a localized diurnal pattern as well as variability in weather.

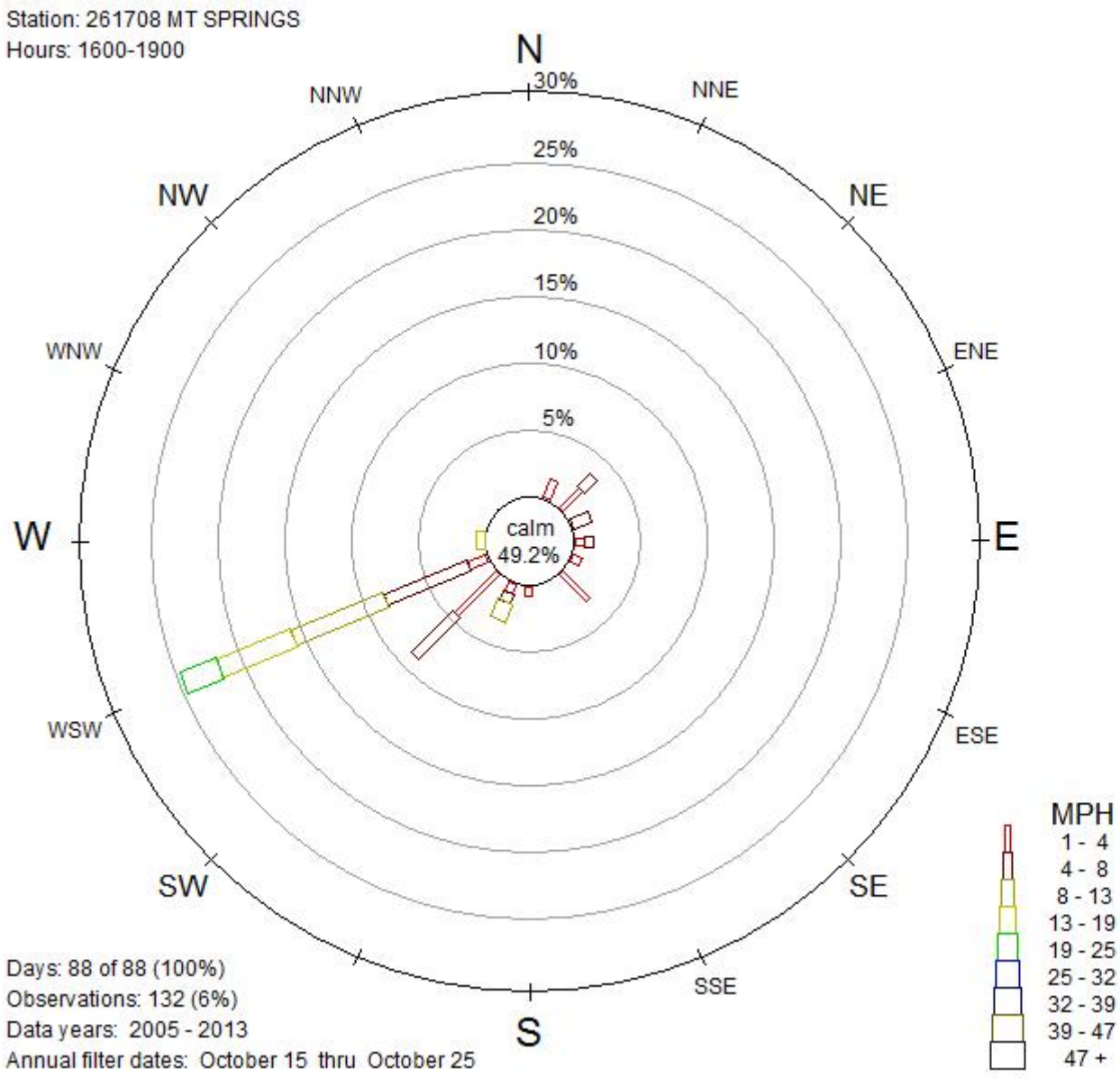
2005-2013 10/18 1600-0059 (data source Mesowest)

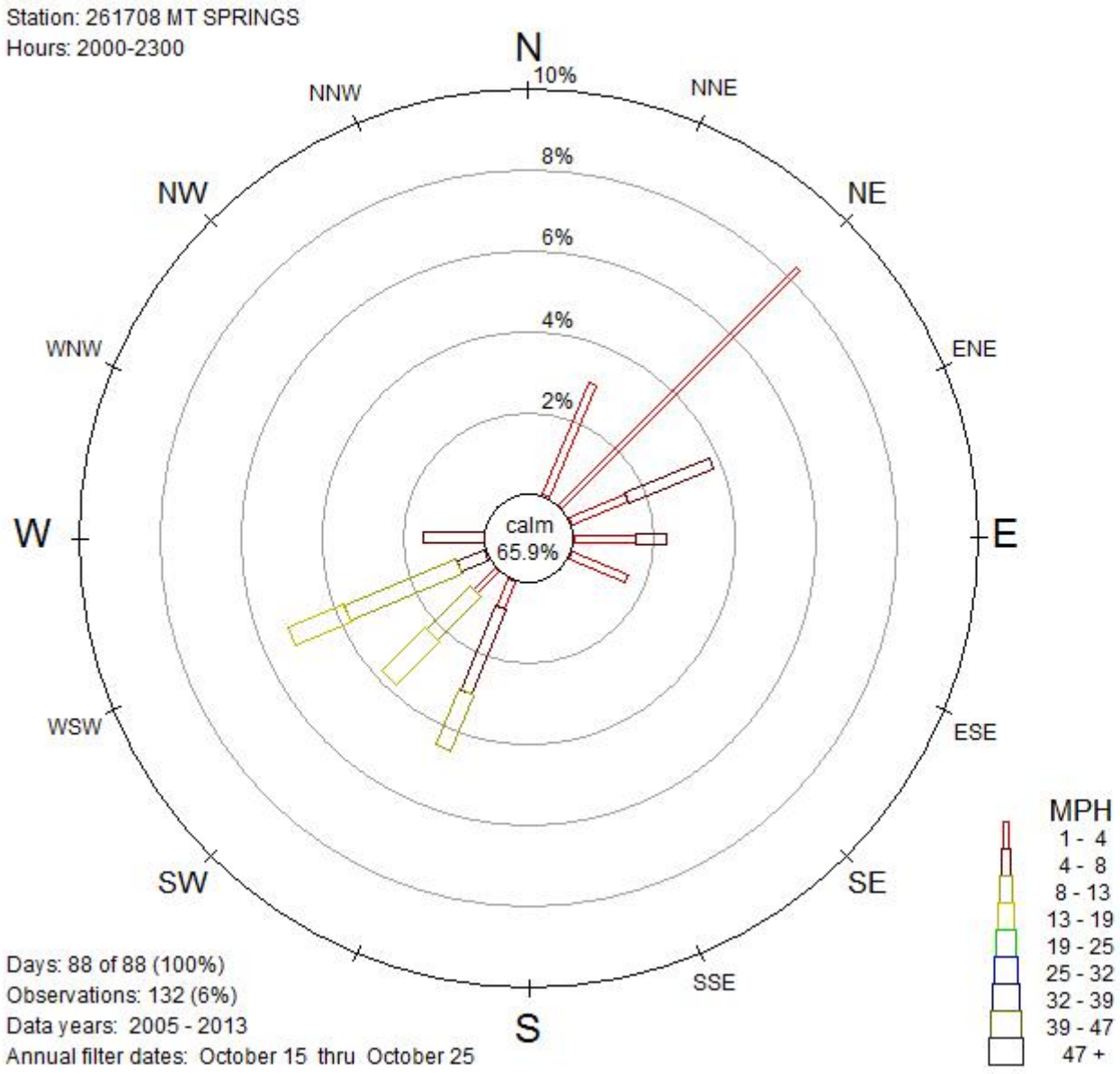
Jean ID = JEAN2	TMP ° F	RELH %	SKNT mph (wind speed)	DRCT ° (wind dir.)	PREC in	DWP °F
Average	63	36	8	51	0.32	27
Max	84	92	19	326	1.06	54
Min	45	5	1	0	0.00	14
Mode	55	17	8	33	0.00	24
Median	62	30	8	33	0.04	24
Count	50	124	52	42	7.00	38
StDev	9.3	20.9	3.5	72.4	0.48	10.8

2008-2013 10/18 1600-00:59 (data source Mesowest)

Jean SE 2 ID = JSEN2	TMP ° F	RELH %	SKNT mph (wind speed)	DRCT ° (wind dir.)	PREC in	DWP °F
Average	69	28	6	246	0.13	27
Max	88	91	13	354	0.47	52
Min	57	11	1	11	0.00	16
Mode	66	21	13	354	0.00	27
Median	68	21	3	337	0.02	27
Count	65	40	20	11	4.00	20
StDev	6.4	17.9	4.7	128.3	0.23	8.5

The following wind rose charts are from the Mountain Springs fire weather station for 10/15-10/25, 2005-2013. The Mountain Springs weather station is 20 miles northwest of Jean Dry Lake. The wind rose is not representative of the specific conditions local to Jean Dry Lake but it does show diurnal wind patterns (generated using Fire Family Plus; FAMWEB, https://fam.nwcg.gov/fam-web/ data accessed 7/25/2014).


Station: 261708 MT SPRINGS
Hours: 1600-1900
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SW
WSW
W
WNW
NW
NNW
30%
25%
20%
15%
10%
5%
calm
49.2%
MPH
1 - 4
4 - 8
8 - 13
13 - 19
19 - 25
25 - 32
32 - 39
39 - 47
47 +
Days: 88 of 88 (100%)
Observations: 132 (6%)
Data years: 2005 - 2013
Annual filter dates: October 15 thru October 25



Fire Behavior

Fire behavior is comprised of weather, topography, and fuels. Weather, topography, and fuels are described in previous sections. Note steep slopes can contribute to increased fire behavior. The Jean Dry Lake area is generally flat. The dry lakebed is a barrier to fire.

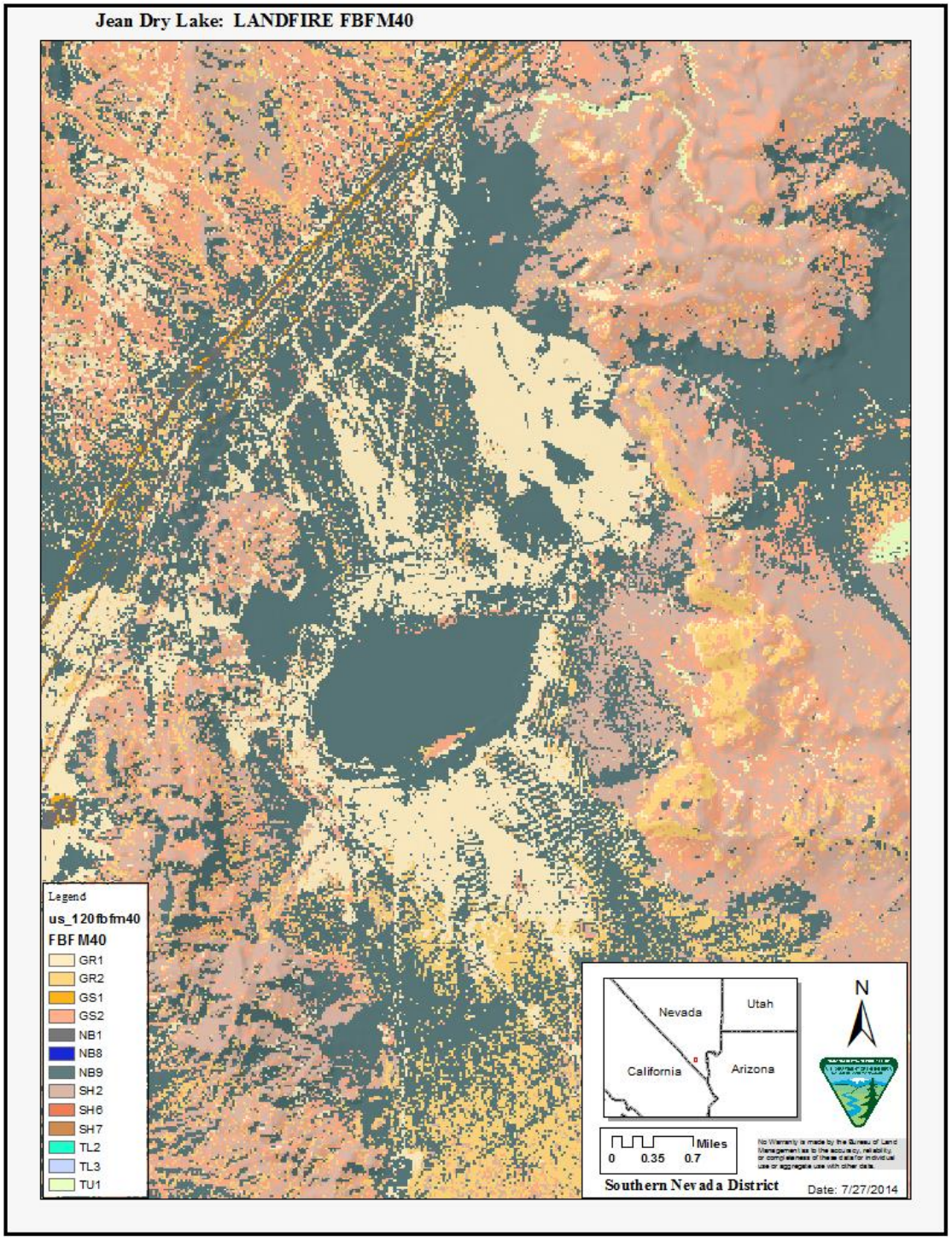
Fire risk can be extrapolated from expected fire behavior. Expected fire behavior can be modeled. Fire behavior models utilize inputs related to weather, topography, and fuels. Weather inputs can be generated from weather station data. Topography inputs can generated from spatial data. Fuel inputs are based on fire behavior fuel models. Fire behavior fuel models are representative of wildland fuels or vegetation. Fire behavior and fire behavior fuel models are subject to model assumptions. For example, model outputs usually represent worst case scenarios. BEHAVEPlus and FLAMMAP fire behavior models were used to model potential fire behavior for the Jean Dry Lake area.

Inputs for Probability of Ignition (PIG) are air temperature and fine dead fuel moisture. Night time reference conditions were utilized. Low PIG means less chance of a fire ignition. The lower the temperature and the higher the fine dead fuel moisture means a lower PIG and less percent chance of a fire starting. BEHAVEPlus was used to model PIG for 10/18 based on historic local data for the time period 1600-0059.

BEHAVEPlus: PIG for Jean Dry Lake

1-h	Air Temperature				
Moisture	oF				
%	44	55	66	77	88
2	84	86	89	92	96
4	62	64	67	69	72
6	46	48	50	52	54
8	34	35	37	39	41
10	24	26	27	29	30
12	17	18	20	21	22
14	12	13	14	15	16
16	8	9	10	10	11
18	5	6	7	7	8
20	3	4	4	5	5

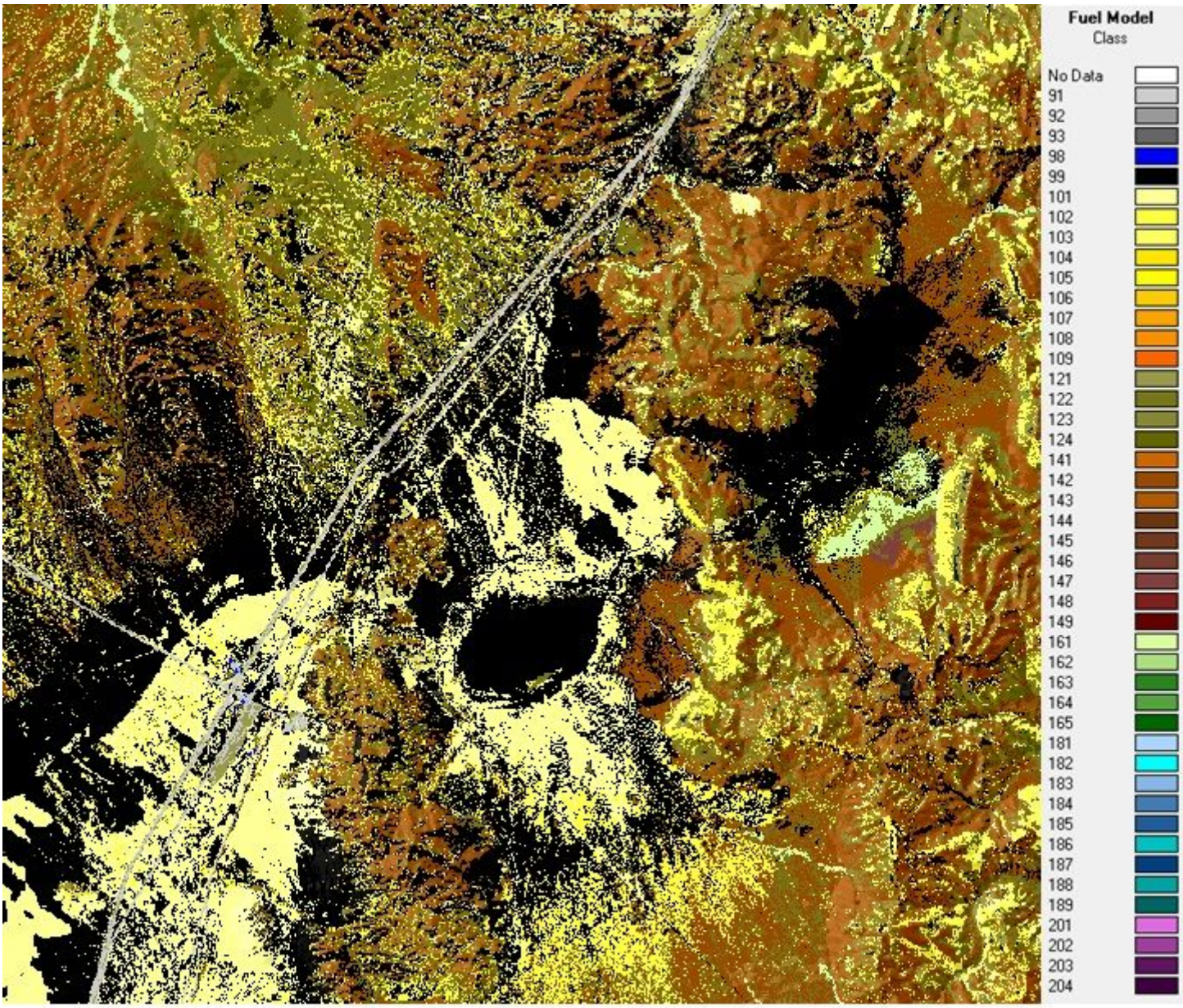
FLAMMAP was utilized to model fire behavior in the Jean Dry Lake area. Model assumptions apply and have to be taken into account in understanding the results. For instance, model outputs are only as good as their inputs; the models project worst case scenarios; and the models assume uniform, burnable fuels. As described in the previous sections, fuel and weather can vary seasonally and annually in the Mojave region. The models will predict possible conditions and outcomes for any given area that can support fire ignitions and fire spread. The models provide a measure of relative risk in the form of fire behavior outputs important to fire suppression such as flame length and rate of spread. The following map shows the representative fuel models utilized in modeling fire behavior (LANDFIRE, http://landfire.cr.usgs.gov/viewer/, accessed 7/25/2014). Note the area northeast of Jean Dry Lake known as Hidden Valley. This area is shown as barren in the fuel model data however, it is in the Hidden Valley grazing allotment and can have grass fuels present that can support fire spread. On the ground validation of fire/fuels conditions is always important when assessing fire danger and risk.



The following FLAMMAP outputs were generated using LANDFIRE data and user inputs

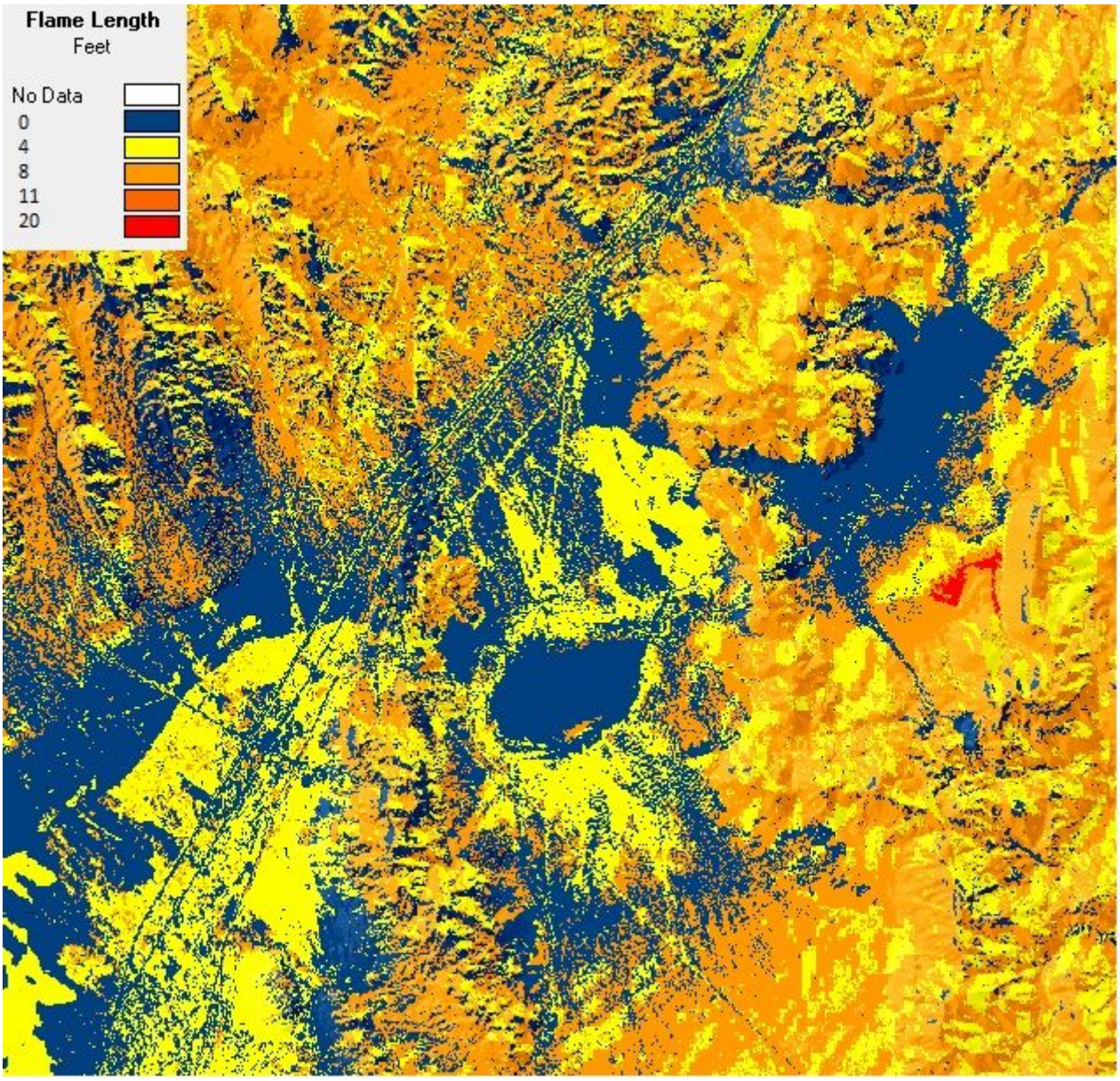
FLAMMAP/LANDFIRE FBFM40

Chapter 3 Affected Environment:

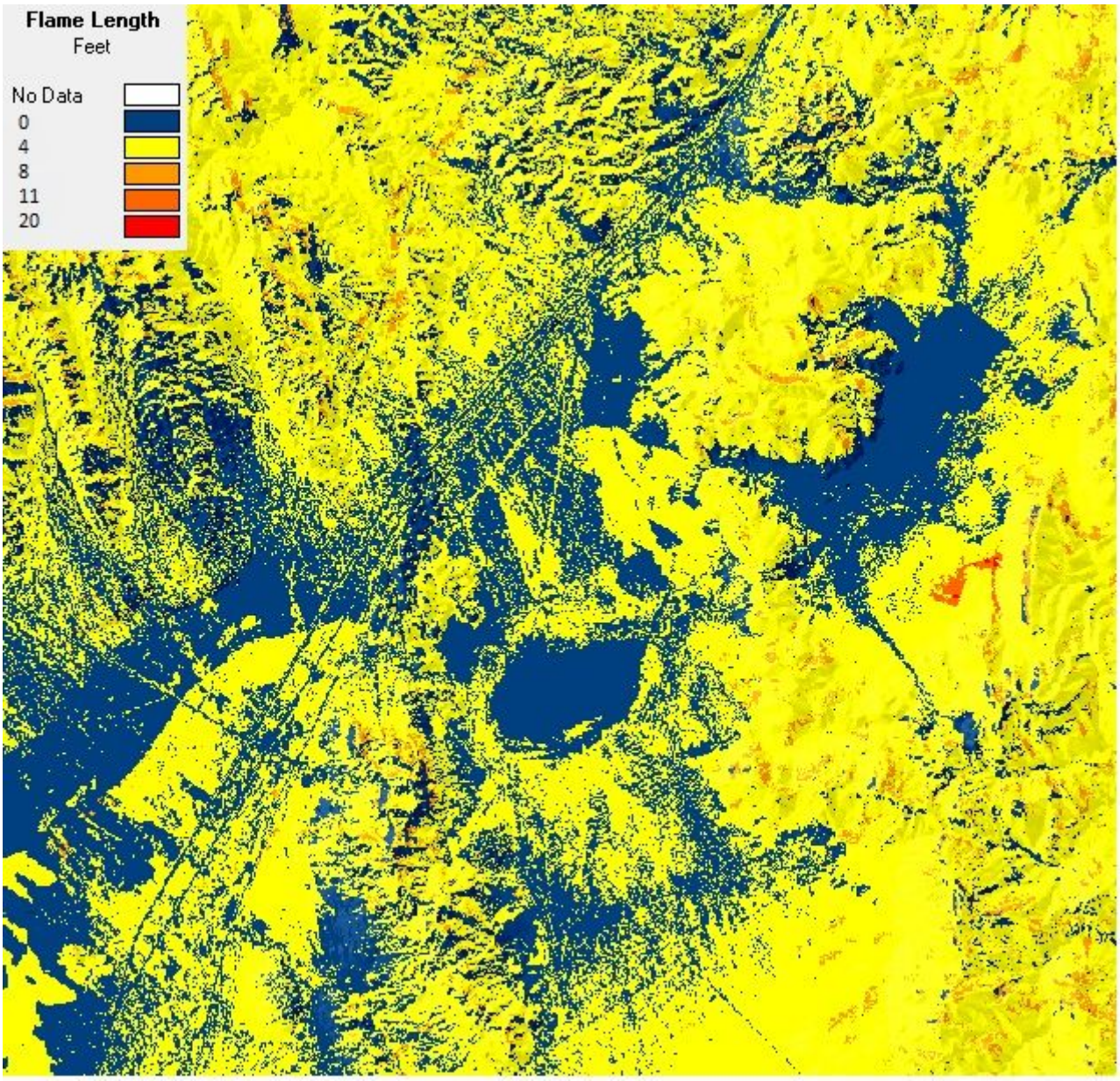


FLAMMAP Flame Length

Hot/Dry Scenario

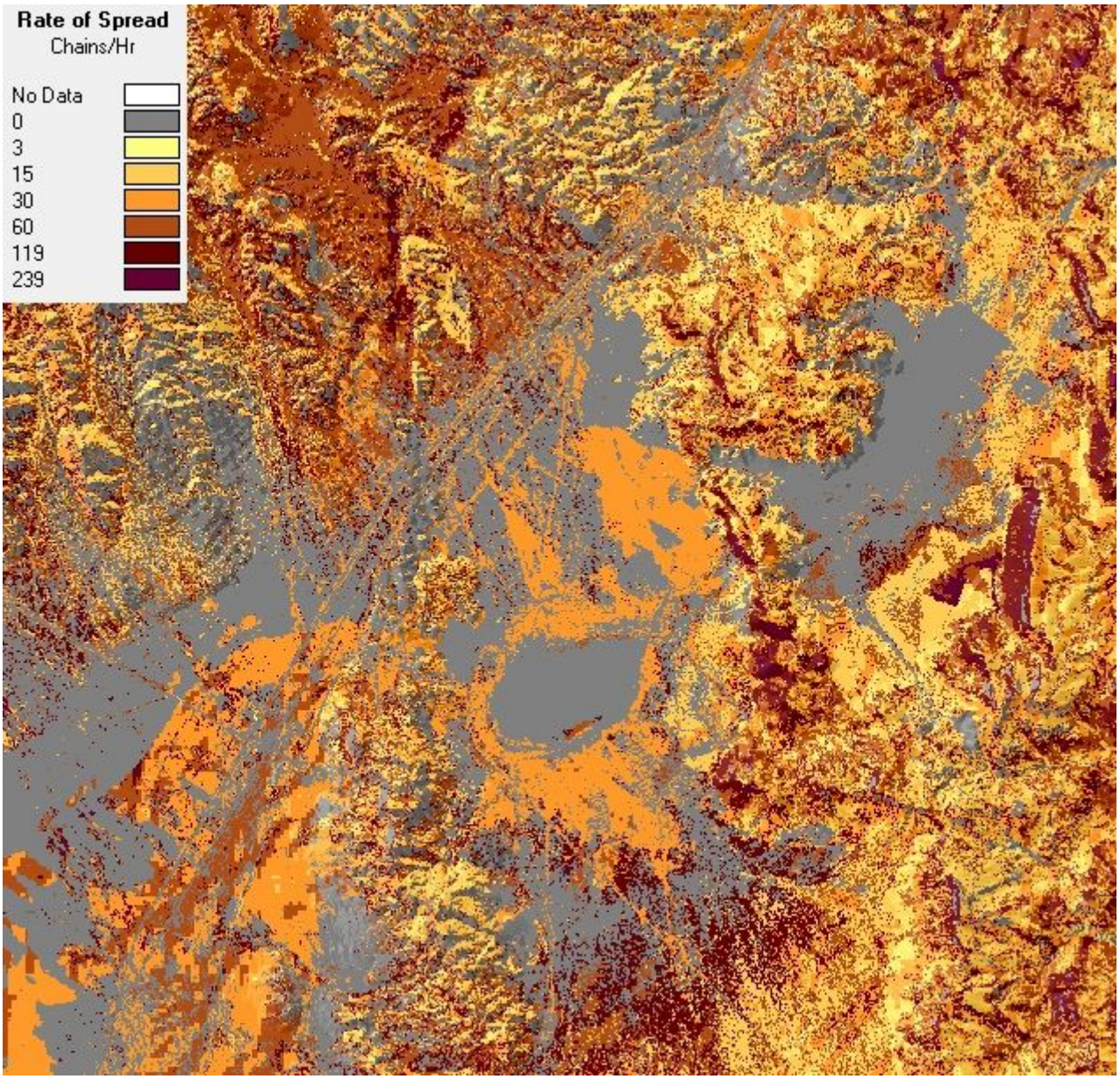


Cooler Seasonal Scenario

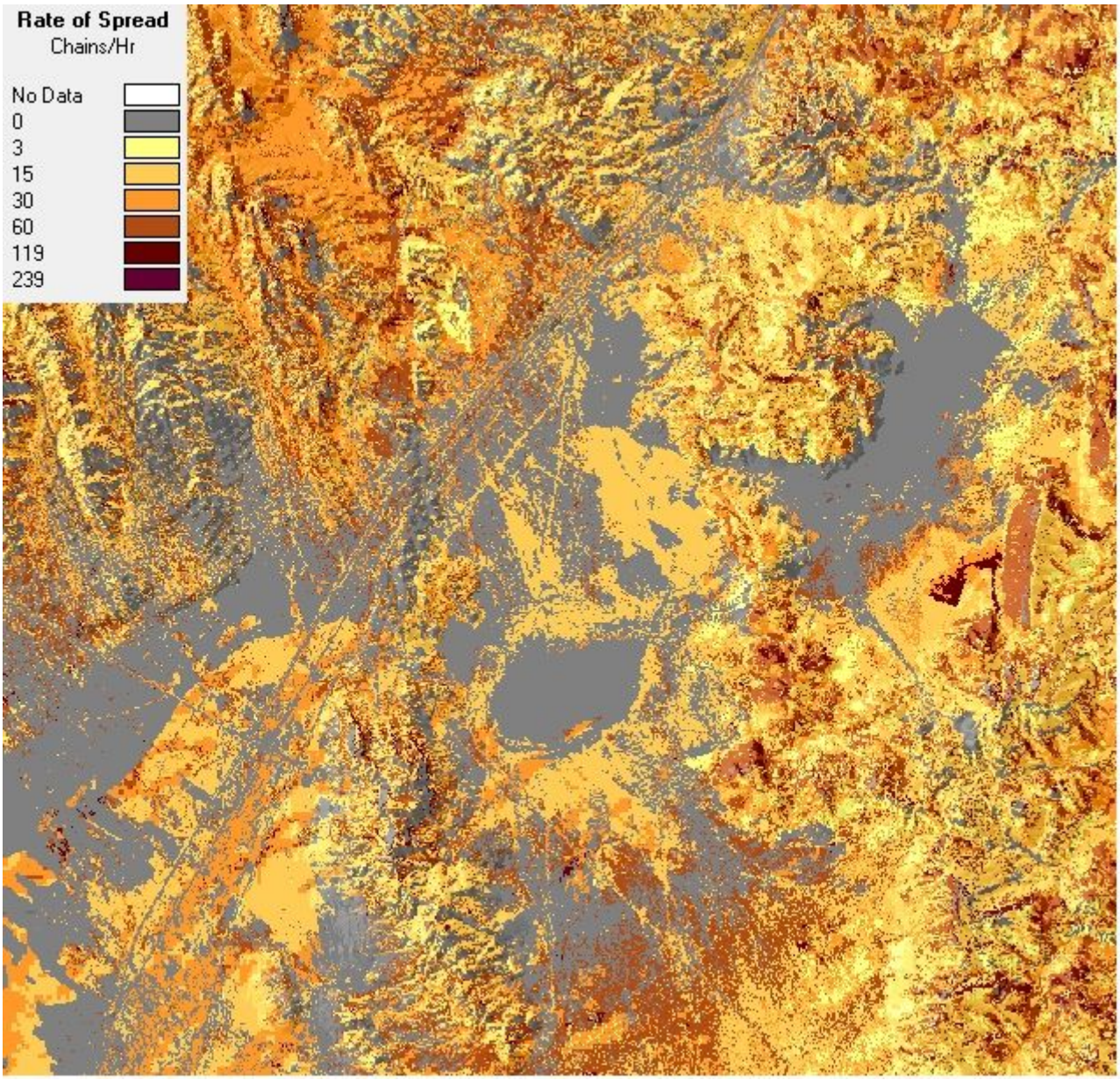


FLAMMAP Rate of Spread

Hot/Dry Scenario



Cooler Seasonal Scenario


Rate of Spread
Chains/Hr
No Data
0
3
15
30
60
119
239

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Chapter 4. Environmental Effects:

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WILDLIFE

Although there is no new surface disturbance of wildlife habitat associated with this project, wildlife species may be found on the adjacent undisturbed lands and could wander into the proposed project area. The primary direct impact of the proposed action on wildlife would be mortality resulting from vehicles.

Lanterns may be blown miles away from the Jean Dry Lake bed. Lanterns that are not found and picked up may be blown around or litter wildlife habitat for numerous years until the materials break down. Lanterns that reach the ground while still burning or with glowing embers may ignite vegetation. Any fire through creosote-bursage vegetation will create major loss of wildlife habitat as well as a loss to individual mammals, birds, and reptiles caught in the fire. Creosote-bursage communities are susceptible to *Bromus* establishment post-fire, which increases the flammability of the vegetation, thereby increasing the chances of large fires. Fire significantly reduces shrub richness and diversity regardless of time since fire.

BLM Sensitive Wildlife Species

The direct impacts of the proposed action on western burrowing owl, chuckwalla, banded Gila monster, Mojave shovel-nosed snake, desert glossy snake, and Mojave Desert sidewinder would be loss of nesting habitat and forage and mortality and harassment of individual animals.

MIGRATORY BIRDS

Migratory birds, including the BLM sensitive species the western burrowing owl (*Athene cunicularia hypugaea*), may be present in the project area.

Lanterns may be blown miles away from the Jean Dry Lake bed. Lanterns that are not found and picked up may be blown around or litter migratory bird habitat for numerous years until the materials break down. Lanterns that reach the ground while still burning or with glowing embers may ignite vegetation. Any fire through creosote-bursage vegetation will create major loss of migratory bird nesting habitat as well as a potential loss to individual ground-dwelling birds caught in the fire. Creosote-bursage communities are susceptible to *Bromus* establishment post-fire, which increases the flammability of the vegetation, thereby increasing the chances of large fires. Fire significantly reduces shrub richness and diversity regardless of time since fire.

THREATENED & ENDANGERED SPECIES

Since tortoises have been found within ½ mile of the site and undisturbed habitat exists adjacent to the project site, there is potential for tortoises to be impacted by the proposed action from the large number of vehicles entering the site or at nearby staging areas. Direct impacts to tortoises could be injury or death (by crushing) by vehicles, harassment/harm (by being moved out of harm's way), or loss of habitat or life by fire.

Lanterns may be blown miles away from the Jean Dry Lake bed. Lanterns that are not found and picked up may be blown into burrows or litter tortoise habitat for numerous years until the materials break down. Lanterns that reach the ground while still burning or with glowing embers may ignite vegetation. Any fire through creosote-bursage vegetation will create major loss of desert tortoise habitat as well as loss to individual tortoises caught in the fire. Creosote-bursage communities are susceptible to *Bromus* establishment post-fire, which increases the flammability of the vegetation, thereby increasing the chances of large fires. Fire significantly reduces shrub richness and diversity regardless of time since fire.

Ingress and egress to the dry lake bed area will be restricted to 1-2 designated roads only, and the speed limit for the event will be 15 mph on the road entering/exiting the site per the terms and conditions of the biological opinion. A desert tortoise monitor will be required to be on-site and assist with any issues that arise with desert tortoises and inspect roads prior to vehicles entering the project area, per terms and conditions 1.d. A monitor will not be necessary to be on-site as vehicles exit the area, since it will be at night while tortoises are in their burrows. A desert tortoise monitor must be present while using any heavy equipment (e.g., for grading), per terms and conditions 1.f. All staging and parking areas for vehicles will need to be on the dry lake bed or in other disturbed areas typically used for event parking, and vehicles in these staging and parking areas will check underneath them for tortoises before moving them. If a desert tortoise is observed in the road, all activities will cease until the desert tortoise has moved to a safe area on its own, per 1.d. of the terms and conditions.

Section 7 Consultation for this project will be covered under the Programmatic Biological Opinion (84320-2010-F-0365.R002) contingent on compliance with the terms and conditions. Terms and conditions and minimization measures in the above Biological Opinion contain measures to reduce potential impacts, including take, to desert tortoise. A copy of the terms and conditions has been uploaded to ePlanning (Sec 7 Log # NV-052-14-166). This notice will serve as the Section 7 Determination and no additional paperwork will be provided.

Geology / Mineral Resources/Energy Production

Night Ranch Road and Light Haul Road will be closed to all traffic except for authorized personnel during the proposed event. These closures will prevent mine operators, employees and business partners from accessing the mines, effectively shutting the mine down for the duration of the event. As these mines operate on nights and weekends during times of high demand for their product, these mines, their employees and their partners may be adversely affected by this action. The negative effects could include the loss of sales, loss of production, loss of deliverables, loss of labor hours, etc.

The proposed events will also bring groups of people within close proximity to existing mine sites. As the mines might not have any personal on site during the events there is potential for event participants and spectators to enter the mine sites. This could lead to damage of the mine operators equipment and facilities, theft, injury to the intruder, etc.

Fuels/Fire Management

The proposed action does include wildfire minimization measures such as only releasing sky lanterns under certain weather conditions, engineering the sky lanterns and planning the event to reduce the risk of wildfire. The proponent's goal is to prevent wildfires that could be caused by the planned activities.

While many wildfire concerns can be minimized, mitigated or planned for, the fireworks or up to 20,000 sky lanterns could be potential ignition sources that could start a wildfire on BLM lands. Weather and winds can be forecasted but as is commonly known, weather and winds can be unpredictable. Sky lanterns could drift or be blown off course or some sky lanterns may not operate as planned and cause a fire on BLM public lands. Fireworks are commonly known to start fires on BLM public lands. A member of the public attending the event could inadvertently cause a sky lantern to malfunction or accidently or purposely start a fire. As a result factors or variables that effect wildfires need to be considered to assess possible environmental effects.

Seasonal Fire Danger

The proponent is planning the event outside of seasonal fire restrictions. The project proposal is for the fall where seasonal fire danger is usually below critical fire danger thresholds. At lower fire danger levels, wildfire risk is decreased.

If the proposed activity were to be carried out under increased fire danger conditions then the potential for a wildfire would also increase. In the Mojave region, fires can occur year round. Seasonal fire danger can vary.

Wildland Fuels

The proponent is planning the event on Jean Dry Lake which is essentially devoid of fuels. The proponent expects most if not all lanterns will land within the dry lakebed. In this case, there would be little to no threat of wildfire.

However, there are fuels present on adjacent lands that could burn if sky lanterns drift off course or are blown off course or fail to operate as expected.

Drought conditions have resulted in decreased fuel moisture. Drought conditions have resulted in less invasive annual grass production. Fuel continuity on adjacent lands is variable and some areas may not easily support fire spread or are devoid of fuels. Some areas may be able to support fire spread. Currently, wildfire risk due to fuels is reduced because of less invasive annual grass.

Fuels change seasonally and annually in the Mojave region. If fine fuel loading were to increase then then the potential for a wildfire would increase.

Probability of Ignition (PIG)

Up to 20,000 sky lanterns, fireworks or related activities could cause a wildfire on BLM public lands. However, the proponent is planning the event on Jean Dry Lake which is essentially devoid of fuels. The proponent expects most if not all lanterns will land within the dry lakebed.

There are fuels present on adjacent lands that could burn if “hot” fireworks or sky lanterns drift off course, are blown off course or fail to operate as expected. The expected flight distance of the sky lanterns is up to 2 miles and according the proponent, “for the last half-mile of the lanterns’ flight path, the lanterns will be inert with no flame and no fire hazard.” The proponent expects most if not all lanterns to be cool to touch when they land.

The proposed activity is planned for nighttime in October where lower temperatures and increased relative humidity will result in lower PIG. Wetting rain on fuels can reduce PIG however, the effects are generally short in duration in the Mojave region.

If hot and dry conditions occur during the planned activities then the PIG would increase and could result in increased chance of an ignition.

Weather

Air temperature and relative humidity would be expected to be at seasonal levels however, variations are possible. Rain and cloud cover can also lower temperatures and increase relative humidity. Lower seasonal temperatures and higher relative humidity generally result in reduced fire danger.

Wind speed of 10 mph or greater is known contribute to fire spread in the planning area. The proponent is planning the proposed activity for wind speeds of 10 mph or less to mitigate sky lantern travel. At wind speeds of 10 mph or less fire danger is less.

Wind direction has some uncertainty. Because the planned activities are at night, diurnal wind patterns may establish sometime after sunset. Nighttime winds can be less. When and where the lanterns are launched, wind speed and wind direction will result in where the lanterns ultimately land.

Jean Dry Lake is ovoid in shape and the long axis runs roughly southwest to northeast for about 2 miles. The opposing axis is a little over 1 mile wide. Depending on the launch location, wind speed, and wind direction lanterns could land outside of the Jean Dry Lake bed.

The sky lanterns are expected to go as high as 2,500-5,000 feet above ground level. The wind profile can be variable by elevation and could result in changes direction and speed which can result in lanterns landing in unexpected locations.

The current expected burn out time for the lantern fuel cell is 6-8 minutes and expected distance of travel while "hot" is 0.7 miles. The expected flight distance of the sky lanterns is up to 2 miles and according the proponent, "for the last half-mile of the lanterns' flight path, the lanterns will be inert with no flame and no fire hazard." The proponent expects most if not all lanterns to be cool to touch when they land. Lanterns that fail to operate as expected are expected to fall within Jean Dry Lake Bed.

Winds over 10 mph could result in sky lanterns landing outside Jean Dry Lake. Changes in wind direction or a less than optimal wind direction could result in lanterns landing outside Jean Dry Lake. Launching the lanterns in a less than optimal location with respect to wind direction could also result in lanterns landing outside Jean Dry Lake. Sky lanterns in the I-15 corridor or landing in Jean, NV would be a significant concern.

Fire Behavior

The lakebed is mostly devoid of fuels and acts as a barrier to fire. Roads or barren areas adjacent to Jean Dry Lake will also act as barriers to fire. Areas with very little fuel or discontinuous fuels may be resistant to fire spread.

For seasonal or expected fire danger and low wind speeds, in the event of a wildfire, flame lengths and rates of spread would be less than where fire danger is above expected or average seasonal conditions.

In the event of a wildfire, higher than expected wind speeds could result in increased fire behavior. Wildfires occurring in continuous fuels such as black brush or pinyon/juniper could exhibit increased flame lengths and rates of spread due to drought conditions. Based on historic fires that have occurred within a 5 mile radius of Jean Dry Lake, fires have been less than 0.1 acre with the largest being 11.2 acres. No BLM fires within the 5 mile radius have been documented as occurring in October.

Wildfire Effects

Where no wildfires occur there will be no wildfire effects.

If a wildfire were to occur and conditions were not present for active fire spread, minimal wildfire effects would be expected.

If a wildfire were to occur and conditions were present for active fire spread, WUI or resource values could be threatened, damaged or destroyed. A wildfire under these conditions could threaten Jean, NV and the I-15 corridor. Smoke from a wildfire could impact the event participants, Jean, NV and the I-15 corridor. Desert tortoise habitat could be impacted. Wildfire impacts could be costly and require emergency stabilization, rehabilitation and restoration. Suppression actions could result in resource damage and high costs. Special status lands are nearby to the project area. If a wildfire became established and burned into a special status area impacts and costs would be increased.

Fire Prevention and Safety

Sky lanterns that land in the Jean Dry Lake or land and are “cool to the touch” would likely not result in a wildfire. Fireworks that remain within Jean Dry Lake area would not likely result in a wildfire.

Participants and members of the public could accidently or purposely start a wildfire. Fireworks or lanterns that fail or land in unexpected locations and are “hot” could start a fire and threaten public and fire fighter safety.

In the event of a wildfire, wildfire situations can evolve quickly, can be dynamic and can result in threats to public and fire fighter safety.

Lantern failure or variables effecting lantern performance such as increased wind speed or changes in wind direction could result in decreased public safety, including the I-15 corridor and Jean, NV. Improper use of the sky lanterns or ignition devices by the public could result in decreased safety. Failed or malfunctioning fireworks could result in decreased public safety.

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Chapter 5. Cumulative Effects

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Permitted events may increase the potential for direct and indirect effects on desert tortoises and sensitive species as well as the degradation of potential habitat. Other types of recreation may increase as a result of bringing more people into the project area, including target shooting, hiking, and camping. Any increase in human activities in the project area would increase the potential for take of desert tortoise and/or sensitive species through intentional or unintentional killing, degradation of habitat, spread of weeds, and increase in the risks of wildfires, vandalism, and trash dumping, and poaching. Under current conditions, effects associated with the proposed event would occur in a small portion of the overall habitat available for desert tortoise and sensitive species and State of Nevada and BLM land use restrictions should reduce or mitigate potential cumulative effects to species associated with this event.

Where wildfire does not occur there will be no cumulative impacts due to wildfire.

If a wildfire were to occur under conditions of little to no spread potential, cumulative impacts would be minimal but would contribute to the short term loss of values and ecosystem function in the area. Fire regime condition class in the area probably would not be affected.

If a wildfire were to occur under conditions where active fire spread is possible, cumulative impacts would be considerable as it would result in short and long term loss of values and further degrade fire regime condition class in the area.

The proposed action is likely to enhance the public's interest in using sky lanterns or similar devices which could result increased human caused wildfires on BLM public lands. Increased human caused fires would result in increased short and long term loss of values and ecosystem function; resulting in a worsening of fire regime condition class.

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Chapter 6. Mitigation Measures

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1. All mining operators must be contacted by the proponent and notified at least 30 days before the event takes place. The proponent is responsible for telling the mining operators that Night Ranch Road and Light Haul Road will be closed to nonevent related traffic. Contact a BLM Recreation Specialist for a complete list of mining operators.

2. The proponent is responsible for ensuring that participants in the event and spectators do not enter any mine sites provided in the list of mining operators.

3. The proponent will allow mine personal through road closures so that they may access their mine sites during the race event, however, the race proponent will not allow dump trucks, haul trucks, heavy equipment, etc. to cross the road closers during the race.

4. The terms and conditions identified in the biological opinion completed for this race course will be included as permit stipulations.

5. Coordinate with the BLM on wildland fire safety.

6. Work with the BLM to obtain a spot weather forecast from the NWS for the day of the event.

7. Consult with the BLM on fire danger and fuel conditions two weeks prior to the event.

8. In the event of a wildfire, coordinate any emergency mass evacuation with the BLM wildfire Incident Commander to ensure public safety.

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Chapter 7. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 7.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
US Fish and Wildlife Service	Section 7 consultation	B.O.#. 84320-2010-F-0365.R002
Rise Festival LLC	Project Proponent	
Clark County Fire Department	Coordination on the event.	
Clark County Department of Aviation	Coordination on the event.	
Clark County Public Works	Coordination on the event.	
Las Vegas Metropolitan Police Department	Coordination on the event.	
Nevada Highway Patrol	Coordination on the event.	
Federal Avation Administation	Coordination on the event.	

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Chapter 8. List of Preparers

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Table 8.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Lisa Christianson	Air Quality Specialists	Air Quality, HazMat
Carla Wise	Wildlife Biologist	Wildlife, T&E Species
Evan Allen	Geologist	Geology, Minerals, Mining
Fred Edwards	Botanist	Vegetation, Rangeland, T&E Species, Grazing
Krystal Johnson	Wild Horse & Burro Specialist	WH&B
Randy Kyes	Wilderness Specialist (former)	Wilderness/WSA
Ben Klink	Weeds Specialists	Weeds, Fuels
Randy Kyes	Wilderness Specialist (Great Basin Institute)	Wilderness, WSR,
Chris Linehan	Outdoor Recreation Planner	SRP Lead, Recreation, Travel Management
Stan Plum	Archeologist	Cultural, Paleo
Boris Poff	Hydrologist	Hydrology, Water Quality, Riparian, Soils
Kerri-Anne Thorpe	Realty Specialist	Lands/Access